DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028283
Date Inspected: 28-Aug-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job Site

CWI Name:	Scott Kortum and John Pagliero			**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 13W-W2.5@ 5030mm drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Lin E. Yun continuing to perform CJP groove welding repair at location Y=1660mm per Caltrans approved Request for Weld Repair (RWR) #201208-069. The welder was observed manually welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. The second time repair excavations were preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in plate on top of the deck prior/during welding. During the shift, ABF QC Scott Kortum was noted monitoring the welder with measured working current of 120 amperes on the 3.2mm E7018H4R electrode. The welder adjusted preheat temperature of 325°F during welding. The welder completed the weld repair mentioned above during the shift and performed the Post Weld Heat Treatment (PWHT) of 450°F and held it for one (1) hour after welding as required.

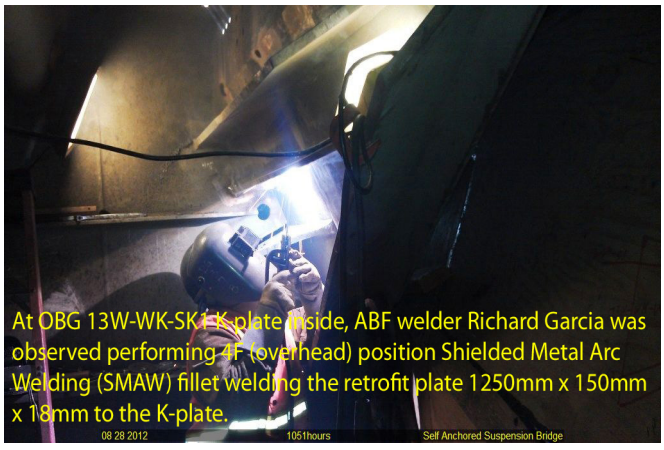
At OBG 13W-WK K-plate inside, ABF welder Richard Garcia was observed continuing to perform 2F/4F (horizontal/overhead) SMAW fillet welding the 1250mm long x 150mm wide x 18mm thick retrofit plate to the K-plate. The welder was noted using 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-F1200A. During the shift, ABF QC John Pagliero was noted monitoring the welder with measured working current of 128 amperes on the 3.2mm E7018H4R electrode. The plates were

preheated to more than 250°F using propylene gas torch prior welding. The welder was noted fillet welding 8mm on both sides of the retrofit plate to the K-plate. During the shift, fillet welding on both sides of the plate was completed and the welder went to the other side of the K-plate where he performed more excavations and repairs due to UT detected defects as stated below.

At OBG 13W-WK-SK1 K-plate inside, ABF welder Richard Garcia was observed continuing to perform repair welding. ABF welder Richard Garcia was observed welding in the 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode. The welder preheated the repair area and its vicinity to more than 250°F during welding. During the shift, ABF QV John Pagliero was noted monitoring the welder with measured working current of 125 amperes on the 3.2mm E7018H4R electrode. The following three (3) first time repairs were noted excavated and welded during the shift;

	Y-location	Length	Width	Depth	Remarks
1.	550mm	110mm	20mm	17mm	In-progress.
2.	680mm	120mm	25mm	15mm	In-progress.
3.	1510mm	150mm	20mm	17mm	Excavated.

At OBG 12W/13W side plate C1.1 outside, ABF welder Rick Clayborn was observed performing excavation using carbon air arc gouging on the removal of Ultrasonic Testing (UT) detected defects on welded splice butt joint. After the completion of the excavation, this QA was able to talk to the welder and during the conversation he mentioned that prior to the arrival of this QA he preheated the area where he is excavating using two propylene gas torch in tandem then measured the required excavation preheat of 225°F with 225°F temperature crayon. The welder showed this QA three (3) sets of temperature crayons with settings of 225°F, 350°F and 450°F. The carbon air arc gouging/excavation on the defect removal was completed at around 1630hours and the welder performed smooth grinding on the groove of the excavation until the rest of the shift. The welder then informed this QA that since the other side (top side) of the welded joint will also be excavated (the whole length) same thing as they did on the outside, Magnetic Particle testing (MT) will not be necessary on the bottom side at this time. The welder said that MT will be done on the top side excavation of the welded butt joint.



WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer